

REMARKS

Reconsideration and withdrawal of the rejections set forth in the Office Action dated May 19, 2004, are respectfully requested.

In light of the restriction requirement, discussed with Examiner Nguyen on February 13, 2003, claims 9-11 and 14-18 are being cancelled without prejudice. Thus, claims 1-8, 12-13 and 19-20 are now pending.

In the Office Action claims 1 and 19-20 were rejected as being indefinite.

In the Office Action claims 1-8 were rejected as being unpatentable over Charrat (U.S. Patent No. 5,774,459) in view of Gendel (U.S. Patent No. 6,608,821).

The applicants wish to thank the Examiner for finding claims 12-13 allowable. Further, the applicants wish to thank the Examiner for the detailed comments in the Office Action, including specific recitation of portions within the applied references with respect to certain claims.

I. Amendments

II. Rejections under 35 U.S.C. § 112, second paragraph

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language.

Claims 19-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

By this amendment, claim 1 is amended to delete use of the word "may," and clarify that the first and second portions are related when the first and

second portions relate to a larger block of data to be transmitted. Claims 19 and 20 are amended to delete use of the term "favorable," and amended to clarify that the access check routine indicates whether access to the channel is available. By these amendments, applicants believe that the § 112, second paragraph, rejections are overcome.

III. Rejections under 35 U.S.C. § 103

A. The Applied Art

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Charrat (U.S. 5,774,459) in view of Gendel (U.S. Patent No. 6,608,821).

Charrat is directed to a method of managing message transmissions from multiple transmitters to a single receiver on a single channel, where the "data reception system as well as the management procedures should be extremely simplified, for these transmitters must be small and must cost little." Column 1, lines 53-56.

According to Charrat, "as soon as the receiver receives the transmission from one of the transmitters, it sends all the receivers, at least through the period of transmission by the active transmitter, a binary information element indicating that the channel is busy, and in that the reception of this binary information element inhibits any attempted transmission by the other transmitters." Column 1, line 65 to column 2, line 4. Any other transmitters attempting access will receive this binary information element upon testing the channel. Column 4, lines 28-30. Charrat gives the example of a half-duplex transmission:

In this case, the transceiver 100 sends out a modulated signal on a carrier. When a transmitter (badge) is in the field of transmission of the transceiver 100, the transmitter (badge) tests the channel during the period T_t to find out if the channel is free or busy. The channel is free when the activation signal is present (when the carrier is present). The channel is busy when the activation frequency is absent. Column 5, lines 28-37.

Gendel is directed to a method of avoiding collisions among a plurality of transmitters to a single receiver. Column 3, lines 18-20. The method reduces the probability of collision by providing a randomization of the interpacket gap times used by each transmitter. Column 4, lines 37-42. For example, each of the transmitters randomly transmits a data packet during one of a number of sub time slots, lowering the probability of collision. Column 5, lines 48-53.

Claims 19-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Charrat (U.S. 5,774,459) in view of Gendel (U.S. Patent No. 6,608,821) and further in view of Yamazaki et al. (U.S. Patent No. 6,724,777).

Yamazaki is directed to a method enabling reliable, efficient data communications even in noisy environments. Column 1, lines 6-13. The method entails determining the transmission success of a data packet to be transmitted, and upon failure of transmission, reducing the number of data bits originally transmitted and retransmitting a data packet with a reduced number of data bits. Column 4, lines 36-47.

B. Analysis

Distinctions between claim 1 and the applied references will first be discussed, followed by distinctions between the applied references and the remaining claims. Thereafter, additional arguments for the patentability of the independent claims will be discussed, including reasons why a *prima facie* case for unpatentability is believed to be lacking.

The Applied References, Even in Combination, Lack the Recited Combination of Elements

The invention of claim 1 recites aspects of the invention not disclosed in Charrat or Gendel, namely a method for accessing a reverse channel of a

receiver by monitoring a forward channel to determine the availability of the reverse channel. Charrat recognizes that there will be a random distribution of simple transmitters (badges, for example) attempting to access a receiver at any given time. However, it is apparent in Charrat that these transmitters test the receiver through the *same channel* through which they will transmit information, and not by testing or monitoring another channel. Gendel apparently fails to make up for the deficiencies in Charrat: Gendel discloses different slots and frequencies, but does not performed the claimed channel testing. Thus, neither applied reference discloses "monitoring a forward channel . . . to determine whether the reverse channel is available," for transmission, as recited by claim 1.

Furthermore, the invention in claim 1 recites the additional aspect of transmitting to the base station (receiver) a first portion of data after determination that the reverse channel is available. In the simplified method of managing transmission, Charrat is *silent* with regards to the aspect of sending a *portion of the data* to be first transmitted upon the determination that a channel is available, and therefore does not disclose this aspect of the claimed invention. While Gendel teaches of a slotted transmission system, Gendel apparently fails to disclose dividing a large block of data into numerous portions.

Moreover, Gendel states that the "transmission of the same data packet during a plurality of time slots is, however, crucial to the collision avoidance method of the invention." Gendel, column 6, lines 14-17. Such an arrangement of transmitting the same data twice is unnecessary under the presently claimed invention which employs more of a reservation-type system, rather than the Gendel system of compensating for collisions. Further, as described below, Charrat would not be combined with Gendel. Thus, for at least the reasons above, claim 1 is patentable over Charrat in view of Gendel.

Possibly more importantly, neither Charrat nor Gendel disclose a method for accessing a reverse channel for communication between fixed remote units and bay stations in a fixed wireless network. Gendel discloses a wireless transmission system, and makes no mention of whether units are fixed or mobile,

but implies that such transmitters are mobile. Claim 1 is clearly directed to a fixed wireless environment.

The Applied References Teach Away From the Claimed Invention

The Examiner states that it would have been obvious to one of ordinary skill in the art, at the time of invention, to apply the teaching of Gendel to the teaching of Charrat *to further decrease the probability of data loss*. Charrat teaches "the risk of having two simultaneous transmissions start on two different transmitters is almost zero," and the cases where this happens is "very rare." Column 4, lines 20-24. Thus, why would one skilled in the art apply the system of Gendel to Charrat to "further decrease the probability of data loss," when the system of Charrat already produces the risks of collision to "almost zero."

Further teachings away between Charrat and Gendel exist. The Gendel system is directed to using a particular transmission arrangement, for example multiple of time slots, "to minimize the probability of collision among transmitted signals from different non synchronized transmitters," and therefore is a "method of avoiding collisions among a plurality of transmitters." Column 3, lines 18-25. Although Gendel provides a solution to the problem of a high frequency of collisions among transmission signals, the invention of Charrat does not have this problem, as the risk of collision between transmission signals is "almost zero" and "very rare" in the method described by Charrat. Charrat *teaches away* from the use of multiple time slots to reduce the probability of transmission signal collision Gendel describes.

Further, and possibly more importantly, Gendel deals with collisions by transmitting the same data twice in multiple time sub-slots. Charrat employs a reservation-type transmission scheme to avoid collisions. The two types of transmission schemes are substantially different whereby one skilled in the art would not turn to teachings of the other. In other words, one skilled in the art in a reservation-type scheme would not turn to a data redundancy scheme for solutions. Overall, it would not be obvious to one of ordinary skill in the art to

combine the teaching of Gendel with the teaching of Charrat because Charrat never suggests an advantage to be derived by combining their teachings.¹

IV. Conclusion

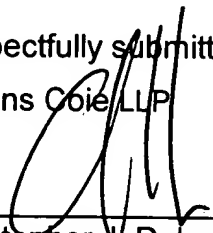
Overall, the combination of Charrat in view of Gendel fails to teach or suggest the features recited in claim 1, and thus the claim is allowable. Since these claims are allowable based on the above reasons, the claims which depend on them are likewise allowable (claims 2-8 and 19-20).

In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. § 112 and patentably define over the applied art. A Notice of Allowance is, therefore, respectfully requested. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-3599.

Date: _____

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¹ *In re Semaker*, 217 U.S.P.Q. 1, 6-7 (Fed. Cir., 1983).